



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.         | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|---------------------|------------------|
| 10/020,518              | 12/14/2001  | Nicholas E. Bratt    | 6580-61415          | 8701             |
| 24197                   | 7590        | 12/14/2004           | EXAMINER            |                  |
| KLARQUIST SPARKMAN, LLP |             |                      | ASSAF, FAYEZ G      |                  |
| 121 SW SALMON STREET    |             |                      | ART UNIT            | PAPER NUMBER     |
| SUITE 1600              |             |                      |                     | 2872             |
| PORTLAND, OR 97204      |             |                      |                     |                  |

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

|                 |              |
|-----------------|--------------|
| Application No. | BRATT ET AL. |
| 10/020,518      |              |
| Examiner        | Art Unit     |
| Fayez G. Assaf  | 2872         |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on 27 September 2004.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-48 is/are pending in the application.

4a) Of the above claim(s) 10-24 and 31-48 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-4,6-9 and 25-30 is/are rejected.

7) Claim(s) 5 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 18 June 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

1) Notice of References Cited (PTO-892)                            4) Interview Summary (PTO-413)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                            Paper No(s)/Mail Date. \_\_\_\_\_.  
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/27/2004.                            5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

Newly submitted claims 34-48 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the newly presented claims are directed a patentably distinct species of the claimed invention of Group I (see the Office Action mailed 4/23/2004).

Species 3: optical transceiver having a prism: claims 34-48.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 34-48 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or

Art Unit: 2872

admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-9, 25, 26, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asghari (PCT WO 99/34539.)

Regarding claims 1, 8, 25, 26 and 28, Asghari discloses an optical transceiver, comprising: a diffractive optical element (12 of Fig. 2); and an optical support (1 of Fig. 2) having at

least a first surface or focusing surface (top mirror 11 of Fig. 2) and a second surface or coupling surface (surface connecting element 3 of Fig. 2), wherein the DOE is configured to direct at least a portion of an optical signal to the first surface and wherein the first surface has a curvature configured to converge the portion of the optical signal and direct the converged portion to the second surface (see Fig. 2.)

Regarding claims 2, Asghari discloses the optical support including a third surface (the etched surface supporting 4A of Fig. 1) and the DOE is attached to the third surface.

Regarding claims 3, 4, 6, 7, 20 and 29, Asghari discloses the DOE being a transmission hologram (4 of Fig. 1) or a reflection hologram (12 of Fig. 2, line 8 to line 11 of Page 3) for a range of selected wavelengths.

Regarding claim 9, Asghari discloses the diffractive optical element being situated at a second coupling surface of the optical support (the etched surface supporting 4A of Fig. 1.)

Asghari discloses the claimed invention except for the optical signal being a "free space" optical signal.

However, the device of Asghari satisfies the claimed structure limitations and appears to be capable of performing

Art Unit: 2872

the function of receiving and directing a free space optical signal.

It would have been obvious, at the time the invention was made, to a person having ordinary skill in the art to adapt the invention of Asghari to receive free optical signals because of its compact, simple and integral structure.

Claims 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asghari.

Asghari discloses the claimed invention except for explicit teaching with regard to the curved surface corresponding to a section of a parabola.

However, such parabolic reflectors are well known in optical communication systems.

It would have been obvious, at the time was made, to a person having ordinary skill in the art to provide the reflectors (11's of Fig. 2) with a parabolic surface so as to simplify alignment of optical elements, i.e. signals parallel to the axis of rotation of the mirrors will reflect to the focus where the DOE is situated.

***Allowable Subject Matter***

Art Unit: 2872

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5 is allowable over the prior art for at least the reason that the prior art fails to teach or reasonably suggest the signal directed by the DOE to the first surface propagating at an angle that is greater than or equal to the critical angle with respect to the third surface as set forth in the claimed combination.

***Response to Arguments***

Applicant's arguments, see page 5, line 1 to line 19, filed 9/27/2004, with respect to claim 5 have been fully considered and are persuasive. The rejection of claim 5 has been withdrawn.

Regarding claims 1-4, 6-9 and 25-30, Applicant's arguments filed 9/27/2004 have been fully considered but they are not persuasive.

Applicant argues that the device of Asghari does not teach the diffraction optical element receiving and directing free space optical signals. First, the examiner notes that the claims are rejected now on new grounds necessitated by

Art Unit: 2872

Applicant's amendment. Secondly, the claimed apparatus in the newly presented claims does not appear structurally different from the prior art apparatus. Furthermore, the device of Ashgari is believed to be capable of performing the function of receiving free space optical signal. See *In re swinhart*, 169 USPQ 226 (CCPA 1971); *In re Schreiber*, 44 USPQ 1429 (Fed. Cir. 1997).

#### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

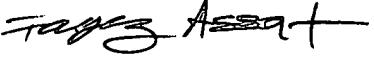
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2872

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fayez G. Assaf whose telephone number is (571) 272-2307. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
FAYEZ G. ASSAF  
PRIMARY EXAMINER

FA

12/11/04